NRO APPROVED FOR RELEASE
22 June 2015

Assigned to: Enzo. M. E. Davies
Project No. 2111
Contract No. AF 49(638)-70
Task Order No.

Policy: 18 Points
Policy: Peaceful Uses
✓ Policy: Space Law
Policy: Bilaterals

TAB 80.

RAND MEMORANDUM

SPACE TECHNOLOGY AND NATIONAL SECURITY: SOME EVOLVING ISSUES

Alton Frye

March 2, 1961

For RAND Use Only

DO NOT QUOTE OR CITE INTERNAL RAND PUBLICATIONS OR CORRESPONDENCE

NRO APPROVED FOR RELEASE
22 June 2015

PREFACE

This RAND Document includes the revised text of a lecture presented to the Senior Seminar in Foreign Policy, Department of State, during the Seminar's annual session at Patrick Air Force Base, Florida, February 24, 1965.

This discussion grows out of a continuing inquiry into political and strategic aspects of astronautics. Among related RAND publications are International Political Implications of Activities in Outer Space (A Report of a conference, Joseph M. Goldsen, Chairman), R-362-RC, May 5, 1960; F. J. Krieger, Soviet Astronautics, 1957-1962, RM-3595-PR, April 1963; and A. L. Horelick, Soviet Interest in the Military Use of Outer Space: Some New Evidence, RM-3157-PR, April 1962.

NRO APPROVED FOR RELEASE
22 June 2015

SUMMARY

In recent years the lingering confusion over the military role in space has begun to dissipate. Presidents Kennedy and Johnson have clarified the "peaceful purposes" provision of the National Aeronautics and Space Act, making clear that peaceful activities in space include those projects necessary to help keep the peace.

By this standard the United States has sought to use those space capabilities which contribute to stable strategic deterrence and to prevent the use of space capabilities which might tend to destabilize the military balance on earth. But the United States has recognized that; even if its fundamental goal of a stable strategic relationship were accepted by the international community, there [illegible] room for conflicting interpretations as to which space activities serve that end. A basic task of U.S. diplomacy has been to win international support for American definitions of permissible and impermissible activities in space.

[illegible] the most important contentions advanced by the United States have been the arguments (1) that observation of the earth from space is a legitimate activity which should have no constraints placed upon it and (2) that weapons of mass destruction should not be stationed in outer space. Initial American attempts to gain acceptance of the first principle evoked a barrage of threats and criticisms from the Soviet Union. In the last two years, however, there have been indications that Soviet opposition to observation from space may have given way to a more tolerant attitude. This apparent change has been signalled in several ways, notably by former Premier Khrushchev's public admissions that the

NRO APPROVED FOR RELEASE
22 June 2015

Soviet Union is itself operating observation satellites. Together with the fact that the Soviet campaign for a prohibition on observation satellites has slackened, at least temporarily, Khrushchev's revelations offer hope that an "open space" policy may be evolving.

The second principal goal of U.S. space policy, preventing the deployment of offensive weapons in space, has also benefited from favorable political trends. The Soviet Union and other members of the United Nations have joined the United States in declaring their intention not to place weapons of mass destruction in orbit. Unfortunately, there exist no adequate procedures for verifying compliance with this declaration. In view of this consideration and the continued ambiguity surrounding the Soviet space program, President Kennedy determined that the United States would be obliged to take its own precautions. As President Johnson subsequently revealed, these precautions have included development of certain ground-based weapons for possible use against hostile satellites.

The emergent international consensus on basic principles for activities in space accords well with the American vision of cooperative exploration and exploitation of this environment, but issues still confront those planning the U.S. space effort. In order to anticipate possible breakthroughs by other powers which might alter the current expectation that orbital weapons will not be deployed, what type and degree of exploratory development should the United States undertake? Now that this country has made a start on an anti-satellite capability, what additional R&D is needed and how large a force should be procured? What would be an appropriate U.S. response to an ambiguous Soviet deployment which might --

NRO APPROVED FOR RELEASE
22 June 2015

or might not -- involve space weapons? In dealing with these and similar issues which permit no simple and conclusive answers, one should recall Albert Wohlstetter's sound advice: "No one has the gift of reliable foresight on these cardinal choices. The primary thing, then, is not to be positive."

NRO APPROVED FOR RELEASE
22 June 2015

SPACE TECHNOLOGY AND NATIONAL SECURITY: SOME EVOLVING ISSUES

The security implications of space technology have been the subject of intense debate and considerable confusion from the beginning of the American space effort. There has been a persistent ambivalence among both policy-makers and the public as to what weight we should accord the military potential of this vast new technology in devising our own space activities and as to what precise role the defense establishment should assume in this field.

The roots of this ambivalence are quite clear in the legislative history of the space program's basic charter, the National Aeronautics and Space Act of 1958. Both Congress and the Eisenhower Administration were torn between a profound desire that outer space should not become a new arena for the passions and conflicts of the Cold War and a reluctant recognition that the technological horizons in space might have major political and strategic significance. As drafted by the Administration the proposed Space Act emphasized America's peaceful intentions in outer space. The draft legislation incorporated a concept very similar to that on which the Atomic Energy Commission is based, namely, that a civilian agency should have virtually exclusive direction of U.S. efforts in this area of technology.

To a number of Congressional leaders and to many officials of the Executive branch, however, the AEC analogy did not seem a suitable one for administration of the space program. Unlike nuclear energy, space is not a

NRO APPROVED FOR RELEASE
22 June 2015

scientific or technological category in itself; it is, rather, an environment in which many different kinds of scientific and technical activities can take place. It is an operational medium through which both civilian and military functions may be performed.

Leading members of the House and Senate were convinced that the original draft of the Space Act gave insufficient attention to the potential requirements for military operations in space.[1] Apprehensive that a breakthrough in space by a hostile power might jeopardize peace and security, Congress revised the legislation and assigned to the Department of Defense specific responsibility for space activities "peculiar to or primarily associated with the development of weapons systems, military operations, or the defense of the United States" (including necessary research and development).

In the minds of the legislators this important provision was in no way designed to detract from the Act's fundamental declaration of policy which proclaimed that "activities in space should be devoted to peaceful purposes for the benefit of all mankind." Unfortunately, the law provided no comprehensive definition of what qualifies as "peaceful." In spite of the explicit allocation of responsibility to the DOD, there developed a tendency to contrast "peaceful" activities with "military" activities. This artificial dichotomy contributed to the lingering

---

[1] Alison Griffith, The National Aeronautics and Space Act: A Study of the Development of Public Policy, Public Affairs Press, Washington, 1962, especially pp. 44-55, 97-102.

NRO APPROVED FOR RELEASE
22 June 2015

disputes over the proper scope and character of the U.S. military space program.

In recent years, however, Presidents Kennedy and Johnson have explicitly rejected this false distinction and have established a national policy more consonant with the intent of Congress. They have insisted that peaceful activities in space include those military efforts necessary to help keep the peace.[2] While presidential statements of this principle have not eliminated all the misunderstanding and friction surrounding the U.S. military space program, such pronouncements have assuaged the historic confusion over the "peaceful purposes" provision of the Space Act, and have permitted us to move toward a more balanced construction of space policy.

Obviously, to conclude that a military space program is desirable does not resolve the complex problems of what kind and what size of program should be undertaken. In determining which areas of space technology the United States should exploit for military purposes, political and strategic considerations have properly been primary, although as in all difficult policy decisions, conflicting values and goals have competed for dominance in our decisionmaking. In this discussion I should like to review some of the principal issues that have confronted

---

[2] See President Kennedy's covering letter in United States Aeronautics and Space Activities, 1961 (Report to the Congress from the President of the United States), National Aeronautics and Space Council, Washington, 1962; Dr. Edward Welsh and Dr. Charles Sheldon of the Space Council have played a leading role in clarifying this issue.

NRO APPROVED FOR RELEASE
22 June 2015

those planning the U.S. military space program, to highlight a number of relevant political trends, and to raise some of the dilemmas that remain.

As it has evolved to date, American policy for military activities in space has revolved around two central purposes. Stated most broadly these purposes have been to use those space capabilities which contribute to stable strategic deterrence and to prevent the use of technical capabilities in space which might tend to destabilize the military balance on earth.

By these standards the United States has decided to perfect and employ a variety of space systems, particularly those promising unique or superior capabilities for observation, communication, and navigation, to enhance this country's existing deterrent posture.[3] At the same time American policymakers have chosen to forego development and deployment of space-based offensive weapons and have sought to elicit similar restraint on the part of other nations.[4]

---

[3] As Secretary of Defense Robert McNamara recently stated, "There can be no question about the usefulness of the many unmanned military space programs we have in operation today including: weather, observation, communications, geodesy, navigation, etc. In the application of space to military purposes we presently appear to be far ahead of the U.S.S.R." See "Statement of Secretary of Defense Robert S. McNamara Before the House Armed Services Committee on the Fiscal Year 1966-70 Defense Program and 1966 Defense Budget," February 18, 1965, p. 136.

[4] An early declaration of this policy was made by former Deputy Secretary of Defense Roswell L. Gilpatric on September 5, 1962: "We have no program to place any weapons of mass destruction into orbit. An arms race in space will not contribute to our security. I can think of no

NRO APPROVED FOR RELEASE
22 June 2015

But the United States has recognized that, even if our fundamental goal of a stable strategic relationship were accepted by the international community, there is ample room for conflicting interpretations as to which space activities serve that end. Thus, a basic task of U.S. diplomacy in the space age has been to win international support for American definitions of permissible and impermissible military activities in outer space. Since more than one nation has been tempted to argue that any military activity in space should be outlawed, there have been many difficult moments for American negotiators in forums dealing with outer space. By and large U.S. diplomatic efforts have helped to forge an international consensus, reflected in tacit understandings as well as in several United Nations resolutions and proceedings, that accords well with this country's vision of cooperative exploration and exploitation of outer space. Thus, the U.N. General Assembly has unanimously endorsed the principle that international law, including the U.N. Charter, applies to outer space and celestial bodies, and the principle that outer space and celestial bodies are free for exploration and use by all States in conformity with international law, and are not subject to national appropriation.[5]

---

greater stimulus for Soviet thermonuclear arms effort in space than a United States commitment to such a program. This we will not do." See Department of Defense press release number 1426-62, p. 3.

[5] These principles find expression in U.N. General Assembly Resolution 1721 (XVI), December 20, 1961, U.N. Document A/RES/1721 (XVI), January 3, 1962.

NRO APPROVED FOR RELEASE
22 June 2015

But such generalized pronouncements have not resolved many specific questions bearing on military activities in outer space. The broad umbrella of international agreement on space policy is still a porous fabric beneath which lurks the potential for serious political conflict. This has been especially true concerning two U.S. positions that have critical implications for national security. These contentions are (1) that observation of the earth from space is a legitimate activity which should have no constraints placed upon it, and (2) that weapons of mass destruction should not be stationed in outer space. The evolution of these two issues illustrates the complex political-strategic considerations that have figured so prominently in the American space effort. Let us examine each in turn.

It has been known for more than a decade that satellites promised to be very useful platforms for various kinds of observation missions. Indeed, unclassified analyses have shown that satellite capabilities, although operating at high altitudes and velocities than aircraft, might be able to collect photographic data comparable to that obtained by aerial reconnaissance.[6] The emerging potential of satellites to perform such missions accounted in part for the readiness of the Eisenhower Administration to abandon aerial overflights of the Soviet Union after

---

[6]See Robert S. Rochlin, "Observation Satellites for Arms Control Inspection," Journal of Arms Control, Vol. I, No. 3, July 1963, pp. 224-247; Amrom H. Katz, "Observation Satellites: Problems and Prospects," reprinted from Astronautics, April-October 1960.

NRO APPROVED FOR RELEASE
22 June 2015

the U-2 episode of 1960. At that time the President explained the necessity for obtaining such data as the U-2 gathered and indicated his opinion that the United States was justified in exploiting technological opportunities to gain such information.[7]

Early in the space age the United States began to develop legal distinctions between observation from aircraft, which was admittedly illegal if carried out within the airspace of a subjacent state, and observation from satellites operating outside the established territorial jurisdiction of any state.[8] Predictably, the distinctions advanced by this country were met by a barrage of criticisms and threats from the Soviet Union, which objected to observation of its territory regardless of the location of the sensor. Soviet lawyers, commentators, and officials consistently argued that intelligence collection from satellites or from aircraft was equally unlawful. Beginning in June 1960 Premier Khrushchev and other spokesmen publicly implied that the Soviet Union would deliver an appropriate "rebuff" to any U.S. attempt to use satellites for this purpose.[9] Reported progress by the Soviets

---

[7] See the interesting comments of Allen Dulles, The Craft of Intelligence, Signet Books, New York, 1965, pp. 67-68.

[8] An excellent statement of the U.S. rationale is Leonard C. Meeker, "Observation in Space," Department of State Bulletin, May 13, 1963, pp. 746-51.

[9] A convenient summary of Soviet attitudes toward observation from space is Robert D. Crane, "The Beginnings of Marxist Space Jurisprudence?," American Journal of International Law, Vol. 57, No. 3, July 1963, pp. 615-625. Of special interest in this connection is Khrushchev's

NRO APPROVED FOR RELEASE
22 June 2015

in antimissile capabilities suggested that they might acquire suitable technology for use against satellites, if they chose to do so.

The Soviet position was articulated in various forums dealing with space and became a principal ingredient in their proposed drafts of general principles to govern activities in space. At every opportunity the Soviet delegates to the U.N. Committee on Peaceful Uses of Outer Space pressed for a prohibition on the use of artificial satellites for collection of intelligence information in the territory of foreign states.

The Soviet view aroused considerable sympathy among nonaligned nations and even received support from some Western observers. P. M. S. Blackett argued that American reliance on observation satellites to gather strategic intelligence, coupled with the overwhelming U.S. advantage in weapons, could reasonably be interpreted by Moscow as presenting a threat of a first strike. In varying degrees, Richard Falk, Quincy Wright and other American scholars called the U.S. position into question. There seemed a real danger that an activity vital to Western security might prove politically, as well as technically, vulnerable.[10]

---

speech in Bucharest on June 21, 1960, reported in Izvestiia, June 21, 1960; and G. Zhukov, "Space Espionage Plans and International Law," International Affairs, Moscow, October 1960, p. 75.

[10] P. M. S. Blackett, "Steps Toward Disarmament," Scientific American, April 1962, pp. 45-53; Quincy Wright, "Legal Aspects of the U-2 Incident," American Journal of International Law, Vol. 54, No. 4, October 1960, pp. 836-854; Oliver J. Lissitzyn, "Some Legal Implications of the

NRO APPROVED FOR RELEASE
22 June 2015

The Soviet clamor against observation satellites persisted until 1963 when a new and surprising trend began to appear. During the last 18 months there have been several startling departures in Soviet public declarations and actions concerning this issue. Their net effect has been to undermine the Russian campaign to portray observation from space as illegitimate and incompatible with peaceful activities. In the summer of 1963, just prior to conclusion of the Test Ban Treaty, Khrushchev reportedly told Paul Henri Spaak that some arms control agreements would not require ground inspection, since one could carry out inspection from satellites; he even volunteered, perhaps jokingly, to show Spaak some of his pictures to demonstrate the point. A few months later the Soviet Premier's son-in-law, Alexei Adzhubei, openly hinted to a Helsinki audience that Russia was engaged in reconnaissance from space.[11]

These were the first public implications that the Soviet Union was operating reconnaissance satellites of its own and might be moving toward a more tolerant attitude in this area. Through this same period U.S. analysts were coming to the conclusion that at least some Soviet payloads in the COSMOS series were almost certainly performing reconnaissance missions.[12]

U-2 and RB-47 Incidents," ibid., Vol. 56, No. 1, January 1962, pp. 135-142.

[11] See the dispatch by C. L. Sulzberger, "Those Who Spy Out the Land," New York Times, July 15, 1963; Adzhubei's remarks were reported in Helsingin Sanomat, September 3, 1963.

[12] Dr. Edward Welsh first revealed this conclusion at

NRO APPROVED FOR RELEASE
22 June 2015

Subsequent events have contributed to the impression that historic changes may be under way in the Soviet position on observation from space. Late in 1963 the Russian delegate to the U.N. Committee on Peaceful Uses of Outer Space abandoned his longstanding demand for a ban on use of satellites for intelligence purposes. This facilitated passage by the Committee and the General Assembly of a declaration of general principles for space activities, a declaration that had been stalled for months primarily because of the adamant Soviet stand on observation satellites.

In the spring of 1964 Khrushchev again focused public attention on Soviet reconnaissance satellites by urging the United States, through former Senator William Benton, to cease aerial overflights of Cuba and to employ satellites for surveillance of the island. He alluded to photographs of his own which allegedly provided extensive details of military installations, apparently American facilities, and suggested that he might even be willing to swap pictures with President Johnson. Touring Norway some weeks later, the Soviet leader repeated his assertion that the availability of observation satellites made provocative aerial reconnaissance of Cuba unnecessary. He

---

a public symposium on September 13, 1963; "Does Russia's Space Program Pose a Threat to Our National Security?," Air Force/Space Digest, November 1963, p. 69. More recent evaluations of evident Soviet activity in this field are "Operational Russian Satellites Seen U.S.," Aviation Week and Space Technology, February 22, 1965, p. 22; and "Reconnaissance Satellites," Interavia, Vol. XX, No. 1, January 1965, pp. 104-105.

NRO APPROVED FOR RELEASE
22 June 2015

implied that his remarks reflected the Soviet Union's experience in this field.[13]

Khrushchev's statements regarding the use of satellites over Cuba stand out as astonishing invitations for the United States to use observation payloads, a de facto acknowledgment that observation from space is legitimate.

The inference that important shifts may be taking place in Soviet policy regarding observation satellites gains some strength from the fact that published Soviet commentaries have lately tended to play down threats against U.S. reconnaissance vehicles. Soviet officials and military literature have been practically silent on this point since early 1963, when Marshal Malinovskii last stressed that the responsibilities of Soviet defense forces included "combatting an aggressor's...attempt to reconnoiter our country from the air and from space."[14]

It is not obvious why the Soviets have moved in this direction. They may simply be finding observation satellites an extremely useful adjunct to their own forces. At the same time progress in reducing the vulnerability of Soviet strategic forces may have reassured the Soviet Union about its capacity to tolerate American operations of this kind.

---

[13] For a report of Khrushchev's conversation with Senator Clifton, see "Khrushchev Says Soviet Uses Satellites for Spying," New York Times, May 30, 1964; also see "Khrushchev Gives Warning on Cuba," New York Times, July 1, 1964.

[14] Quoted in Thomas W. Wolfe, Soviet Strategy at the Crossroads, The RAND Corporation, RM-4085-PR, April 1964, p. 252.

NRO APPROVED FOR RELEASE
22 June 2015

Any interpretation one gives to these unexpected developments must be tentative and carry a number of caveats. At the United Nations the Soviets have not explicitly and publicly agreed with the U.S. contention that observation from space is a permissible activity. They have merely dropped, perhaps only temporarily, their insistence that reconnaissance satellites be prohibited.[15] Moreover, in negotiations for an agreement on recovery of space hardware that lands in an unintended area, the Soviets have privately made it clear that they would not return any intelligence-gathering payload that came into their possession. (For that matter, it is not clear that the United States would return a comparable Soviet payload, if it got its hands on one; this country would surely want to process the data and find out what and how well they were doing.)

Yet it is unrealistic to expect the Soviets to bear the international embarrassment of admitting they were "wrong" about observation satellites by publicly reversing themselves and advocating the views so long espoused by the United States. A more graceful and face-saving procedure would be to indicate revised Soviet policy on this subject by dropping the previous campaign to outlaw observation satellites and by assuming a passive attitude toward

---

[15] Soviet legal commentators continue to inveigh against any notion that such satellites are "peaceful" (and hence legitimate) vehicles. An obvious tension has thus arisen between Soviet actions in space and certain legal rationales that have enjoyed wide acceptance among Soviet lawyers. See Julian G. Verplaetse's review of a recent Russian volume dealing with space law, Kosmos i Mezdunarodnoe Sotrudnichestvo, Journal of Air Law and Commerce, Autumn 1964, pp. 398-400.

NRO APPROVED FOR RELEASE
22 June 2015

U.S. efforts to obtain specific international sanction for such activities.

There are many important uncertainties in projecting the apparent changes in the Soviet position, especially in the wake of the palace revolution which brought Brezhnev and Kosygin to power. Do the new rulers share Khrushchev's evident disposition to advertise Soviet reconnaissance vehicles and to tolerate other nations' observation satellites? There are some hints that dissonant voices are being raised among those in charge of the Soviet space program. For example, although the Soviets agreed to a cooperative exchange of cloud cover photography and other weather data, they have not fulfilled this commitment on schedule and have given no indication of when they will do so. Since it appears that Soviet technology is adequate to the task, a plausible explanation for their laggard performance under the Dryden-Blagonravov agreements may be a reluctance to reveal their capabilities for photography from space, even at the limited resolutions used for meteorological purposes.[15]

But no government enjoys unlimited freedom to undo all the actions of its predecessors and, even if it wishes to do so, the regime in Moscow may find it difficult to

---

[15] In a statement to the House Committee on Science and Astronautics on February 17, 1965, Dr. Hugh Dryden of NASA indicated that continued Soviet noncompliance with the meteorological agreement would cause the United States to close down the so-called "cold line," a communications link established for the express purpose of exchanging weather data between Moscow and Washington; New York Times, February 18, 1965.

NRO APPROVED FOR RELEASE
22 June 2015

extricate itself from the new tendencies in space policy which Khrushchev inaugurated. There is no retracting Khrushchev's well-publicized admissions that the Soviets have themselves been carrying out reconnaissance from space, a tacit admission that such activity is permissible.

If the Brezhnev-Kosygin government continues to move along the paths opened up by Khrushchev in his later comments on observation satellites, an "open skies" policy for space may prevail. Such a prospect must be welcomed by those nations which have long worked toward that goal. It would relieve the tension under which they have labored in arguing that observation from space is legal but seeking to hide their efforts for fear that others might not agree with them. Clandestine operations are dubious precedents to cite when one is trying to demonstrate the legitimacy of a particular principle. Those who support observation from space as both legal and valuable may be grateful to the former Soviet Premier for strengthening their case.

The second principal goal of American space policy, preventing the deployment of offensive systems in space, has also benefited from favorable political trends, in spite of the fact that technology has moved steadily and rapidly toward a level at which space-based strategic weapons might be practicable. Unlike the U.S. rationale regarding observation satellites, this principle of American policy has enjoyed widespread international support from an early date. The Soviet draft of a treaty on General and Complete Disarmament, no less than the American proposals in that area, included a prohibition on orbital weapons of mass destruction, although for several

NRO APPROVED FOR RELEASE
22 June 2015

years the Soviets refused to consider such a ban apart from GCD.

But there have been recurrent doubts as to whether this policy is really a wise one for the long run. One can conceive of space weapons to which the United States might be attracted for purposes of deterrence; satellites deployed in random orbits might provide highly invulnerable systems that could only be used effectively for retaliation and would not raise fears that the United States contemplated a first strike. Moreover, by diverting counterforce fire away from the continental United States, deployment of weapons to space might serve the U.S. goal of damage-limitation, although associated facilities on earth would still be inviting targets. There has also been a grave concern that technological progress might yet undermine the utility of existing strategic capabilities; if so, it could prove essential to station a deterrent force in space.

While these possibilities have been recognized, the controlling factors in U.S. policy have been to avoid provocative innovations in the strategic forces and to prevent another spiral in the arms competition. Several considerations have encouraged the United States to exercise restraint in deployment of weapons in space and to attempt to elicit similar restraint on the part of the Soviet Union.

Enjoying preponderance in present types of strategic weapons, the United States has not had a strong incentive to shift the arms race to a new environment and to novel technologies. Furthermore, although either the United States or the Soviet Union presumably could place thermo-

NRO APPROVED FOR RELEASE
22 June 2015

nuclear weapons in orbit, there have so far appeared to be no decisive military advantages which would make deployment of such satellites a rational strategy.[17] America's current strategic superiority has also provided a margin of confidence that the country could afford the risks that might be involved in a policy of self-denial.

This situation contrasts with a number of previous junctures in the contemporary arms race. For example, to most analysts and to the responsible decisionmakers the competition in space technology differs markedly from the race for the thermonuclear weapon. The policy debate of 1949-1950 produced a consensus that the United States could not forego development of the H-bomb in hopes that the Soviets would do likewise.

Although the space age has witnessed more than one display of Soviet rocket-rattling and attempted nuclear blackmail, there have been indications that the Russian Government might be genuinely interested in moderating the Cold War. The enunciation of the peaceful coexistence doctrine and renunciation of the Marxist-Leninist doctrine of the inevitability of war were impressive innovations in the Soviet political posture. To a number of policy planners, these radical deviations from previous Communist positions seemed worth testing and an attempt to induce

---

[17] As a State Department spokesman said some months ago, "Today both the United States and the Soviet Union have the capacity to place thermonuclear weapons in orbit. But, according to the best military advice available, there is now no rational military purpose in doing so." Richard N. Gardner, "Outer Space: Problems of Law and Power," Department of State Bulletin, September 2, 1963, p. 371.

NRO APPROVED FOR RELEASE
22 June 2015

mutual restraint in deployment of space weapons appeared one comparatively safe method of doing so.

It has, of course, been recognized that the low value assigned by the United States to space weapons might differ drastically from Soviet estimates. Space planners have had to be constantly alert to the different strategic criteria and doctrines of the Soviet Union, giving special attention to prospects that might enable the Soviets to overcome their current military inferiority. One must always appraise the utility of space systems not only in terms of a retaliatory second strike that might be compatible with U.S. strategy, but also in terms of a possible first strike against U.S. targets, or in terms of a bold campaign of nuclear blackmail rather than a strategy of stable deterrence. In several respects space weapons might lend [illegible] to the Soviet Union than to the United States.

This a cardinal question for U.S. policy planners has been, [illegible] even if the Soviet Union saw no overwhelming strategic advantage in space weapons, would it seek to exploit such capabilities for psycho-political effects, augmenting its reputation as an invincible modern power? These questions have plagued American policy for years.

Soviet commentators and officials have maintained a pattern of ambiguous allusions to possible military implications of Russian activities in space, while keeping details of their program under strict security wraps. Without claiming a bombardment satellite capability, Premier Khrushchev, Cosmonaut Titov, and others have de-

NRO APPROVED FOR RELEASE
22 June 2015

clared that the rockets which launched the Vostoks could orbit "other payloads" for other purposes. In early 1963 the late Marshal Biryuzov offered the most explicit remark on this subject when he announced that the Soviet Union could launch rockets from satellites at any time in their orbits and in any direction.[18]

These menacing overtones in Russia's discussion of her space program, together with her apparent capability actually to deploy a Vostok-class bombardment force and to jury-rig an antisatellite system for attacks on U.S. payloads, led most analysts to the conviction that the United States required at least a limited antisatellite capability. It was hoped that a system that could interrupt any Soviet attempt to deploy bombardment satellites and that could take reprisals for any attacks on American space systems would deter hostile action by the Soviets in space. The President and Secretary of Defense have recently announced U.S. development of certain ground-based weapons for the antisatellite mission.[19]

---

[17] For the allusions to offensive capabilities in space see Walter Wilds, Soviet Strategy in the Crosscurrents, pp. 114 ff. In a press conference of February 17, 1963, Premier Khrushchev emphasized that the Soviet Union had [illegible] satellites in space, since existing [illegible] the capabilities for any mission requiring [illegible] of warheads. New York Times, February [illegible].

[18] See also U.S. Air Force to Down Enemy Satellites, September 13, 1964; "Weapons Rolls Up Unexplained Hits on Missile Tests," New York Times, [illegible]. This is probably also described in [illegible] the House Armed Services [illegible].

NRO APPROVED FOR RELEASE
22 June 2015

As the détente began in 1963, those following Soviet discourse on space detected a noticeable shift in public commentary related to military activities. The earlier crescendo of implied threats to exploit space weapons gave way to greater Soviet insistence on international cooperation in outer space and on avoiding deployment of orbital weapons. The altered tone of Soviet discussion of these matters gained credibility by the promising thaw in the Cold War. Not only did the nuclear Test Ban Treaty prohibit nuclear explosions in space but the Soviets joined in the unanimous U.N. resolution of October 17, 1963, expressing the members' intentions not to orbit weapons of mass destruction.

However, the resolution made no provision for verification. Recognizing that some day the Soviet Union might decide to place weapons in space, President Kennedy declared that "we obviously have to take our own precautions."[20] Debate continues as to what contingency preparations the United States should take to guard against violation of this international commitment. The ambiguity of the Soviet space capability persists. Until ICBM or SLBM systems, space weapons might be deployed without the United States discovering them. Although the presence of satellites in orbit might be known, one could not be sure whether or not they contained weapons.

In spite of these difficulties the United States has been encouraged to maintain its policy of restraint by the general improvement of the Cold War climate.

---

[20] See the President's news conference of October 9, 1963, New York Times, October 10, 1963.

NRO APPROVED FOR RELEASE
22 June 2015

The variable trends in the public face of Soviet space policy are obviously not a firm and final guide to appropriate U.S. policy, and many uncertainties remain. But it is inevitable that some of our decisions have to be taken before all the data are in. In dynamic relationships between self-governing units, each must try to anticipate and respond to choices and acts of the other even before they are decided upon.

There is some evidence that the Soviets also are having a difficult time reaching firm decisions on the military role in space. An internal debate comparable to our own may be under way. The Soviets may have adopted a more conciliatory tone regarding efforts in space because they are now less optimistic than formerly that space technology is a promising avenue for strategic innovations. They may also see the extraordinary pace of the U.S. program as likely to deprive the Soviet Union of possible political or military advantages in space. But no responsible analyst assumes that any one of these hypotheses is the explanation for the apparent shift in Soviet attitudes and behavior in this area. It remains possible that Russia's less bellicose behavior on these matters will prove transient. The present display of sweet and reasonable amiability may obscure the malign trend actually taking place in the Soviet space program.

For this reason, among others, many issues remain for those engaged in devising a satisfactory U.S. space effort. In order to anticipate possible breakthroughs by other powers which might alter the current expectation that orbital weapons will not be deployed, what type and

NRO APPROVED FOR RELEASE
22 June 2015

degree of exploratory development should the United States undertake? Now that this country has made a start on an initial antisatellite capability, what additional R&D is needed and how large a force should be procured? What relative priorities should one assign to nuclear and non-nuclear kill mechanisms for such a system? What are the implications of the nuclear Test Ban Treaty of 1963 for antisatellite operations? What would be an appropriate U.S. response to an ambiguous Soviet deployment which might -- or might not -- involve bombardment satellites?

In dealing with such issues we would do well to remember, as Donald Kornig noted a few weeks ago, that the operating assumptions which serve as answers to them are not necessarily right or wrong, or true or false. They are, rather, wise or less wise.[21] And since wisdom in human affairs can only be wrested in the crucible of experience, we must be prepared to revise our current tentative hypotheses on these matters as experience may dictate.

In space, as in other areas of political and strategic significance, the values we involve to gain our action may not always be compatible with each other and one may have to make trade-offs and sacrifices among them. Decer-

---

[21] Albert Wohlstetter, in customary fashion, has stated a similar view: "The important point is that on these complex cardinal questions, answers are won precariously and intermittently, in the course of hard empirical inquiry into the major factors affecting choice....No one has the gift of infallible foresight on these cardinal matters. The primary thing, then, is not to be positive." "Illusions, Error and Strategy," Foreign Affairs, April 1963, p. 473.

NRO APPROVED FOR RELEASE
22 June 2015

rence may not always comport with damage-limitation, and avoidance of new spirals in the arms race may be difficult to manage if one is intent on hedging against a competitor's treachery.

Those concerned with the political and military dimensions of the nation's security must approach their task with both tolerance and humility, recognizing that the greatest threat to success in our complex endeavor is a dogmatic assurance that one's own position is absolutely and exclusively right. There are multiple paths to national security, and we must not foreclose any of them prematurely.

The vocal self-confidence exhibited by some commentators, both critics and supporters of U.S. space policy, should arouse suspicion. Their blithe disregard of the political and technological uncertainties which still obscure future trends in space reminds one of the encounter between the Archbishop of Canterbury and Cardinal Wolsey a century ago. Leaving a meeting in London at which both had been in attendance, the Archbishop observed that the Cardinal had no transportation and offered him a ride. "After all," said the Archbishop, "we are both engaged in God's work." To which the Cardinal replied, "Yes, you in your way and I in his."

The Cardinal spoke with tongue in cheek, but his remark still parodies the type of smug intolerance that often divides the American defense community. It is an attitude we can ill afford if we are to cope successfully with so problematic a task as planning a balanced space program.